2:15

801-2 Is There a Differential Benefit of ReoPro During PTCA for Patients with Certain Lesion Types?

S. Ellis, A.M. Lincoff, J.E. Tcheng, D.P. Miller, J.E. Booth, R.M. Califf, E. Topol for the EPILOG Study Participants. *Cleveland Clinic Foundation, Cleveland, OH, USA*

Targeting patients (pts) especially likely to benefit from ReoPro (R) (abciximab) would increase its cost-effectiveness. Data from the EPIC study suggested that pts with type A or B1 (simple) lesions might have more acute benefit from R than pts with B2 or C (complex) lesions. This assessment was confounded by the linkage between unstable angina and type A or B1 lesions because of the inclusion criteria of the study. We assessed the relation between ReoPro use, lesion type and 30 day death, MI or urgent PTCA or CABG (comp) in EPILOG, which did not require unstable angina or MI with type A or B1 lesions.

Treatment	% Comp			
	A	B1	B2	C
	n = 278	n = 507	n = 1478	n = 489
Placebo + SD heparin (n = 939)	5.7	5.2	14.5	14.2
R + LD heparin (n = 935)	2.1	4.3	4.5	8.3
R + SD heparin (n = 918)	6.4	2.4	5.3	8.4
p value	NS	NS	< 0.001	0.12

SD = standard dose LD = low dose

Thus whereas all pts shared in the overall 57% reduction in 30 day death/MI from ReoPro in EPILOG, those with complex lesions treated appeared to benefit most. A complete economic analysis will require long-term follow-up data which is not yet available.

2:30

801-3 Analysis of Hospital Costs and Outcomes in RESTORE

RESTORE Economic Study Group. *Emory Univ, Atlanta, GA, USA*

The RESTORE trial (Randomized Efficacy of Study of Tirofiban for Outcomes and Restenosis) was a randomized, double-blind, placebo controlled trial of tirofiban in 2,139 patients undergoing PTCA within 72 hours of presentation with unstable angina pectoris or acute myocardial infarction (MI). Patients were treated with tirofiban 10 μg/kg over 3 minutes followed by a 36 hour infusion of 0.15 μg/kg/min or placebo. At 2 days there was a 38% reduction (8.7% vs 5.4%, p = 0.005) in the composite endpoint of death, non-fatal MI, coronary surgery due to PTCA failure or recurrent ischemia, repeat target vessel angioplasty for recurrent ischemia, or insertion of a stent due to actual or threatened abrupt closure of the dilated artery. This was due largely to a decrease in non-fatal MI by 39% (4.4% vs 2.7%, p = 0.039) and repeat PTCA by 66% (3.2% vs 1.1%, p = 0.001). A cost substudy was carried out in 759 patients in 30 hospitals. Hospital charges were obtained from the UB92 formulation of the hospital bill and then the charges were converted to cost using the cost-to-charge ratios from the individual hospitals. The average hospital cost in the tirofiban group was $9899 ($279 SE) vs $10,279 ($380 SE) in the placebo group (offset $380, 95% CI −430 to 1190). These costs reflect original hospital costs only and do not include professional or follow-up costs. Multiple regression was used to determine the additional cost (AC) of multivariate correlates including subsequent coronary surgery (AC $18,347, p < 0.0001), additional PTCA (AC $6214, p < 0.0001), non-fatal MI (AC $4591, p < 0.0001), stent insertion (AC $5000, p = 0.0004), and a history of heart failure (AC $5292, p < 0.0001), with an R-sq of 0.49. If length of stay is added to the model (AC $829 per additional day, p < 0.0001) the R-sq rises to 0.65. The main drivers of AC (except heart failure) are treatment modifiable. While there was only a trend to lower cost with treatment, it is likely that an early dramatic reduction in events after high risk PTCA can be achieved with anti-platelet therapy without raising costs.

2:45

801-4 Prevention of abrupt vessel closure following PTCA by intracoronary dipyridamole. A prospectively randomised trial in 1094 consecutive interventions

U.E. Heidland, M.P. Heintzen, W.J. Klimek, B. Schwartzkopff, M. Kelm, E.G. Vester, M. Leschke, B.E. Strauer. *Heinrich-Heine-University Düsseldorf, Germany*

Acute coronary artery occlusion following PTCA is a potentially life-threatening complication. Dipyridamole (dip) induces dilatation of coronary arteries and prevents platelet aggregation. The purpose of the study is to evaluate if adjunctive local intracoronary therapy with dip reduces the incidence of coronary artery occlusion following PTCA. In 940 PTCA performances for stable ischemia and in 154 emergency angioplasty procedures (instable angina pectoris, myocardial infarction) patients were randomised to receive conventional pretreatment consisting of heparin 15000 I.E. and aspirin 500 mg i.v. or additional intracoronary infusion of dip (0.5 mg/kg bodyweight). Dip. was applied in 550 interventions (451 men, 90 women, age = 59.2 ± 4.2; 73 emergency procedures); conventional pretreatment was performed in 544 patients (443 men, 92 women, age = 58.3 ± 5.8; 81 emergency procedures). The incidence of coronary artery occlusion is depicted in the tabula (data given as absolute values and as percentages).

	Dipyridamole	Conventional	p-value
Total (n = 1094)	14 (2.5%)	33 (6.1%)	0.004
Elective (n = 940)	10 (2.1%)	20 (4.3%)	0.05
Emergency (n = 154)	4 (5.5%)	13 (16.0%)	0.04

It is concluded, that intracoronary dipyridamole reduces the incidence of abrupt vessel closure following PTCA for stable ischemia and acute coronary insufficiency syndromes.

3:00

801-5 Prevention of Reocclusion After Successful Balloon PTCA of Totally Occluded Coronary Arteries: a Prospective Randomized Pilot-Study Comparing Ticlopidine-Aspirin Association with Aspirin alone

A. Cerisier, K. Isaaz, A. Dacosta, C. Venet, J.-P. De Pasquale, M. Lamaud. *Division of Cardiology, C.H.U de Saint-Etienne, Saint-Etienne, France*

High reocclusion and restenosis rate is an important limitation for balloon PTCA of totally occluded coronary arteries. Recent reports have validated the use of stents to improve late angiographic outcome of balloon PTCA in patients with ≥3.0 mm coronary artery reference diameter but the usefulness of stenting <3.0 mm totally occluded coronary arteries remains to be validated. In the present study, we evaluated the impact of Ticlopidine plus Aspirin (T-A), a strong antiplatelet regimen, on the restenosis and reocclusion rate after successful balloon PTCA of coronary artery total occlusion (TIMI 0) with reference diameter less than 3.0 mm. Nineteen symptomatic patients who underwent successful balloon PTCA for totally occluded artery (occlusion to PTCA time: 20 ± 13 days) were randomized to take 500 mg of Ticlopidine plus 100 mg Aspirin (T-A, 10 pts) or to take 250 mg Aspirin alone (A, 9 pts) during 6 months. Quantitative coronary angiography was performed immediately after PTCA (I) and at 6 months (Fu). There was no difference between the 2 groups regarding age, sex ratio, risk factors, ejection fraction, occlusion localization, occlusion to PTCA time.

Results:

	Ref. diam. (mm)	% stenosis I	% stenosis Fu	TIMI 0 Fu
T-A (n = 10)	2.4 ± 0.4	32 ± 5	54 ± 19	0/10
A (n = 9)	2.4 ± 0.3	34 ± 11	82 ± 31*	6/9*

Thus, Ticlopidine-Aspirin association appears to be more effective than Aspirin alone to improve late angiographic outcome after successful balloon PTCA recanalization of totally occluded arteries. (*p < 0.05)

3:15

801-6 Increased Thrombin Activity In Patients With Unstable Ischemic Syndromes Correlate With Long-term Clinical Events After Angioplasty: Lack of Efficacy of Locally Delivered Urokinase

J.M. Pyles, R.L. Wilensky. *Indiana University, Indianapolis, IN and University of Pennsylvania, Philadelphia, PA, USA*

Intracoronary thrombus during PTCA leads to an increased risk of coronary occlusion both during and after angioplasty (PTCA). Intracoronary or systemic urokinase (UK) does not reduce the rate of untoward clinical events in patients with ischemic syndromes but local UK may potentially be effective. This double-blind, randomized, prospective study evaluated periprocedural and long-term clinical events of 54 patients with acute ischemic syndromes who underwent urgent and emergent PTCA and local delivery of either saline (control) or UK by a hydrogel coated balloon during PTCA. Fibrinopeptide A (FPA), a marker of thrombin activity was sampled from the coronary sinus before and after PTCA and correlated to clinical events. Adverse procedural events were defined as a composite of reocclusion of the artery, emergent bypass surgery or the presence of thrombus after two balloon inflations. The 6 month follow-up was a composite of death, infarction or restenosis. *Results:* Minimal luminal diameters before and after PTCA in both groups were similar. There was no difference in the periprocedural results of the patients randomized to saline or UK. Patients randomized to UK had a statistically significant increase in events over six months (48% vs. 24%, p = 0.04). UK